

El Guanaquín
Newspaper Supplement Evaluation
Summary Report

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INTRODUCTION

Background

El Salvador's *Diario De Hoy* (Today's News) newspaper has been publishing an educational supplement, called "The Children and Us," since 1991. The supplement appears on Tuesdays and Thursdays each week during the school year. The supplement is designed to complement the school curricula approved by the Ministry of Education, and covers the areas of Language, Mathematics, Science, Health and Environment, and Social Studies. The selection of topics is based on the subjects studied in school in grades two through six. The supplement also provides instructions for teachers, developed with assistance from the Department of Education.

Tuesday supplements are directed at boys and girls in the second and third grades, approximately 290,000 students. Thursday supplements are directed at older students, primarily those in the fourth, fifth and sixth grades, approximately 322,000 students. Both supplements are designed to be folded into four pages, permitting a collection of four themes presented in a progressive format.

Due to the popularity and success enjoyed by the supplements, the newspaper decided to complement them with additional material in the Sunday magazine section produced by the newspaper since April, 1937. Originally published as a two-page insert on Saturdays, the magazine evolved into a 10-page comic section on Sundays that includes more than 16 different comic strips. Because it was an established section of the newspaper, had a large number of pages, and was targeted at children, the Sunday magazine was deemed to be an appropriate forum to incorporate non-formal educational material directed at children.

The decision was made in 1994, and the first edition of the magazine to integrate educational material into the comics appeared on June 12, 1995. The new Sunday format was called the *Guanaquín* supplement. As of October 1995, the *Guanaquín* supplement had appeared in 71 editions of the Sunday paper. Ten supplements have been dedicated to environmental issues.

At the same time the *Guanaquín* was launched, the Environmental Protection Project (Green Project) was also initiated. A primary objective of the Project was to coordinate an intensive environmental awareness outreach campaign targeted at young people. The campaign planned to include both formal, non-formal, and informal environmental education components. The Environmental Education and Communication (GreenCOM) Project implements the educational component of Green Project.

Green Project's Environmental Education Division became aware of *El Diario De Hoy*'s efforts and offered to collaborate on the production of the *Guanaquín*. Subsequently, the Division has provided technical assistance to the newspaper staff with environmental themes

addressed by the supplement. Green Project's help has made it possible to publish a supplement with an environmental theme once a month through October 1995. Given the serious lack of high quality educational materials in general in the El Salvador, primarily as a result of the civil war during the 1980s and 1990s, the *Guanaquín* provides an important and accessible avenue for increasing public awareness about environmental issues.

Goals and Objectives of the Evaluation

The Educational Division of Green Project, with the support of the *Diario de Hoy*, strongly advocated conducting an evaluation of the *Guanaquín*. Anecdotal evidence suggested that sales of the newspaper increase when the supplement is devoted to an environmental topic. The increase in sales may be attributed in part to the use teachers make of the supplement with their students. An evaluation was desired in order to examine readership and use of the supplement by teachers and students and explore ways of increasing its utility in the classroom. The evaluation was conducted by a consultant from the GreenCOM Project

1) Goal

To determine readership and use of, and format preferences for, the *Guanaquín* newspaper supplement among male and female teachers and primary school students.

2) Objectives

- , To measure the level of readership of environmental issues of the *Guanaquín* among a sample of students and teachers obtained from schools located where *Diario de Hoy* is sold.
- , To determine how the environmental issues of the *Guanaquín* are used by students and teachers, and opinions about the relevance of the supplement and its application in learning activities both in and out of the school environment.
- , To determine student comprehension of the material by grade level.
- , To determine format preferences among teachers and students. This includes different aspects of design such as graphics, color, the characters, suggested exercises and the presentation of the content.

METHODOLOGY

Questionnaire Development

Two questionnaires were developed: one for teachers and one for students. The questionnaires covered various issues pertaining to the supplement: circulation; general usage; application in class; exercises done with the magazine; thoughts about the themes treated; opinions about the color, design and characters; and the degree of comprehension of the text among students.

Final versions of the questionnaires provided one questionnaire for the sample of teachers, one questionnaire for the sample of students, and two questionnaires to be administered as reading tests to two small subsets of the student sample. All work was done in Spanish to ensure no loss of meaning or clarity during translation. English translations of the final questionnaires are included in Appendices A through C. All four surveys were administered by trained interviewers.

Interviewers

Twelve persons with education field experience and previous experience in questionnaire administration were recruited as interviewers. The interviewers were trained to administer the *Guanaquín* survey, and were provided background information about the Sunday supplement and the purpose of the study. Survey administration skills of the interviewers were verified by the survey coordinator through a pretest held in three schools.

After data collection was completed, interviewers discussed problems and schools were contacted to resolve blank or conflicting answers.

Sampling

In order to select sites to be surveyed, a complete list of the regions where the newspaper is distributed was obtained from *El Diario de Hoy*. Regions receiving the supplement were randomly selected from this list after it was determined what percentage was needed from the San Salvador area and from the provincial regions in order to have a proportional sample. 40% of the sample is concentrated in San Salvador and the surrounding area with the remaining 60% equally sampled from the remaining three provincial regions in the east, west and central parts of the country.

Measures were taken to make sure that persons from different socio-economic strata were included in the sample. This was accomplished in two ways: 1) schools from the San Salvador area and the outlying provinces were taken from both rural and urban settings, and 2) both public and private

schools were sampled. The assumption concerning the latter was that private sector schools, which require paid tuition, attract clientele from middle to higher socio-economic classes. On the other hand, public schools, which are free, attract persons from middle to lower socio-economic classes.

Public and private schools from the chosen sites were asked to participate in the study. Schools that indicated their interest in the study were included on a first response basis. In some cases, travel distance for interviewers was taken into account in this decision. Within each school, several students were surveyed from each grade level. If there was more than one class per grade, a single class was chosen on the basis of scheduling considerations -- the class that was most able to spare students at that moment. Teachers were asked to select several students of average academic performance to participate in the survey.

Surveys were administered the last week of classes during the preparation period for final exams.

1) Student Sample

A total of 267 students from the chosen schools were interviewed using the student survey with a relatively even mix by gender: 47% boys and 53% girls. The majority of the students came from public schools in urban areas. The student sample was deliberately chosen to reflect the distribution of students between the San Salvador area and the provincial areas for the population as a whole, with close to 40% of the student sample taken from the San Salvador area and close to 60% taken from the provinces. A demographic profile of the student sample is included in Table 1.

Table 1: Demographic Profile of All Students (N=267)

Characteristic	All (N=267)	
	n	%
Location of School		
Provincial area	155	58%
San Salvador area	112	42%
Setting of School		
Rural area	30	11%
Urban area	210	79%
Unknown	27	10%
Type of School		
Private	42	16%
Public	225	84%
Grade of Student		
2nd	2	1%
3rd	64	24%
4th	70	26%
5th	72	27%
6th	59	22%

A comparison of demographic characteristics of students by sex is provided in Table 2.

Table 2: Demographic Profile of Students by Sex

Characteristic	Boys (n=125)		Girls (n=142)		<i>p</i>
	n	%	n	%	
Location of School					
Provincial area	78	62%	77	54%	.18
San Salvador area	47	38%	65	46%	
Setting of School					
Rural area	12	10%	18	13%	.67
Urban area	102	82%	108	78%	
Unknown	11	9%	13	9%	
Type of School					
Private	20	16%	120	84%	.91
Public	105	84%	22	16%	
Grade of Student					
2nd	1	1%	1	1%	.82
3rd	34	27%	30	34%	
4th	32	27%	38	37%	
5th	33	26%	39	38%	
6th	35	20%	34	31%	

In addition, a subset of students was given a different survey which included a reading test to evaluate their comprehension of the material in the *Guanaquín*. A total of 55 students from grades 2 through 9 were given individual reading tests. Due to the low number of students tested, a quantitative data analysis could not be performed to determine student differences, so results were qualitatively analyzed. A demographic profile of these students is included in Table 3 below.

Table 3: Demographic Profile of Students Who Took Reading Test by Sex

Characteristic	Grades 1-6 (N=31)		Grades 7-9 (N=23)	
	n	%	n	%
Sex				
Male	14	45%	5	22%
Female	17	55%	18	78%
Setting of School				
Rural area	7	23%	9	39%
Urban area	24	77%	14	61%
Type of School				
Private	6	19%	0	0%
Public	25	81%	23	100%
Grade of Student				
2nd	5	16%		
3rd	9	29%		
4th	6	19%		
5th	4	13%		
6th	7	23%		
7th			8	35%
8th			7	30%
9th			8	35%

The majority (31) of students, those in the primary grades 2-6, read samples from the two *Guanaquín* supplements on deforestation and plants and animals. The secondary school students (23) in grades 7-9 took a similar reading test using supplements on water pollution and the food chain. Students were tested on reading ability and content recall. Samples of text from the *Guanaquín* used in the reading tests for the primary versus the secondary grades were different as they were taken from those issues of the *Guanaquín* newspaper staff felt were designed to be used in the classroom by grades 2 through 6 and those designed for grades 6 through 9. The two samples of text included in the reading tests for both the primary and secondary grades were taken from an issue of the supplement that was felt to be difficult and from an issue of the supplement that was felt to be relatively easy to comprehend. Criteria for judging how easy or difficult an issue was included: complexity of the topic and explanations, layout, word use, and the number of ideas presented. Issues designed for the lower grades in primary school, grades 1-3, tended to be more descriptive and story-like in nature.

Qualitative data is reported separately for the two tests for the lower grades and higher grades. Because creating wider appeal among the younger audience is a concern among the *Gaunaquín* staff, emphasis is placed on the results from the lower grades. An English translation of both survey instruments is included in Appendix B.

2) Teacher Sample

A total of 58 teachers from the chosen schools were interviewed using the teacher survey. The sample, which consisted of 40 females (69%) and 18 males (31%), was examined by location of school (San Salvador area or provincial area), urban/rural setting, and type of school (public or private). The breakdown is included in Table 4.

Table 4: Demographic Profile of All Teachers (N=58)

Demographic Profile of Teachers	All	
	n	%
Location of School		
Provincial area	32	55%
San Salvador area	26	45%
Setting of School		
Rural area	9	16%
Urban area	48	84%
Type of School		
Private	9	16%
Public	49	84%
Grade of Students Taught		
1st	1	2%
2nd	4	7%
3rd	15	26%
4th	14	24%
5th	10	17%
6th	11	19%
9th	2	3%

In general, most teachers came from public schools in urban areas and taught grades 3 through 6.

Comparisons made between male and female teachers are included in Table 4.

Table 4: Demographic Profile of Teachers by Sex (N=58)

Demographic Profile of Teachers	Males		Females		<i>p</i>
	n	%	n	%	
Location of School					
Provincial area	14	78%	18	45%	.02
San Salvador area	4	22%	22	55%	
Setting of School					
Rural area	2	11%	7	18%	.51
Urban area	16	89%	32	82%	
Type of School					
Private	6	33%	3	8%	.01
Public	12	67%	37	92%	
Grade of Students Taught					
1st	-	-	1	3%	.41
2nd	-	-	4	10%	
3rd	8	44%	7	18%	
4th	4	22%	10	25%	
5th	2	11%	8	20%	
6th	3	17%	8	20%	
9th	1	6%	1	3%	

Several differences by teacher gender are apparent. A significantly greater proportion of male than female teachers came from provincial areas. Also, no male teachers who taught the first and second grades were included in the sample.

Data Analysis

The data were analyzed using crosstabulations and the chi-square statistic. The data were examined by gender, location of the school (rural or urban) and type of school (public or private). Tables included in this report provide percentages.

CONCLUSIONS AND RECOMMENDATIONS

Guanaquín staff wished to gather feedback students, and suggestions from teachers, to make the *Guanaquín* more attractive for use in school. Creating wider appeal among the younger audience is one of the primary concerns of the staff. In this section, a summary of the salient findings is presented for both students and teachers. Recommendations are next provided which should prove useful in guiding changes in the pedagogic content and graphic design of the *Guanaquín*, and assist newspaper staff in better tailoring the content of the supplement to readers in the lower grades. Results of this study are meant to facilitate joint decision making by the *Guanaquín* team, USAID, and the directors of the project regarding which activities, strategies and formats are most appropriate for the supplement.

Summary of Results for Students

The study revealed that most of the students surveyed have read the *Guanaquín*. However, there is much greater student use of the supplement in the home than at school. This finding suggests that the *Guanaquín* is generally appealing to students, enough to entice them to use it independently.

The most common ways students reported using the supplement was to study and do the games and exercises. Interestingly, studying with the *Guanaquín* is done more often by children from provincial areas than by children from San Salvador and its surrounding area.

Most students obtained a copy of the supplement by purchasing the Sunday newspaper. Students who do not read the *Guanaquín* said their family does not buy the paper, with boys more often than girls stating that their family cannot afford to purchase the paper. These findings suggest that the cost of the supplement may be too great for some families to bear on a regular basis.

Students were asked their opinions about the various characters and activities in the supplement. Some characters in the *Guanaquín* are better liked by certain subgroups of students, but the *Guanaquín* is the most well-liked of overall. All students surveyed responded that they liked the activities, games and experiments included in the supplement.

Students generally expressed their approval regarding the different design aspects of the supplement: colors, number of drawings, and the placement of paragraphs. However, some students had difficulty reading the text over the background colors, particularly in the deforestation issue.

Although the majority of students indicated they felt the amount of text used was generally sufficient, some students reported problems with reading comprehension. For example, some students had trouble understanding the instructions for certain activities. Other students had difficulty with specific

sections of the supplement. Students most commonly reported having trouble with the experiment sections, particularly boys and students from urban areas.

In addition, reading test results revealed that younger students had a much harder time with the test than students from fourth through sixth grades. Therefore, it would appear that the supplement needs to be better geared to a younger audience. Some of the students also suggested that there was not enough text to explain the specific theme, concept or activity.

Summary of Results for Teachers

Most teachers surveyed are familiar with the *Guanaquín*, with women more often having read it than men, and have used it in the classroom. Teachers who use the *Guanaquín* in their classrooms believe that their students like to use the supplement. The findings further suggest that female teachers tended to use a greater variety of environmental issues than male teachers. Favorite issues were those on trash, pollution and deforestation.

Although the majority of teachers felt the price of the supplement was fair, one quarter of the teachers asserted it was too expensive. Almost half of the teachers also felt it was too costly for all but a few students' parents to purchase each week.

Two-thirds of teachers felt the supplement was easy for students to read and none felt it was difficult. However, when asked about the supplement on a section by section basis, teachers generally indicated that most sections were more appropriate for students in the higher grades, 4th and above, than students in the lower grades. Most teachers believed the majority of sections from the supplement are best suited to sixth graders.

Sections teachers appeared to like more for class use were the science, literature and ecology sections, as opposed to the games, letters and "You Ought to Know" sections. Although over half the teachers used the *Guanaquín* in a lecture and in groups, less than half used it for games, homework or activities. Students were more likely to do these things at home on their own. Thus, stressing these information sections and their correspondence with the curriculum may be the most conducive way to increase use in the classroom.

When asked to comment on a prepared list of possible changes to the supplement, approximately half of the teachers advocated making the issues better correspond with the school curriculum and including a guide. There were a few suggestions teachers gave without prompting to improve attractiveness of the supplement and make it more clear for students. These include: changing the paper to make it easier to collect and save; changing the colors for better visibility or to make it more visually attractive; making it better for different ages; adding more instructions; better promotion; more ecology issues; and cutting down on comic strips to provide more space.

Many teachers, like students, appeared to prefer the *Children and Us* supplement to the *Guanaquín* because it better complements the formal curriculum. Teachers also noted that the *Children and Us* contains more guidelines for use by Teachers. These findings further support the case that the *Guanaquín* should be designed to complement material in the school curriculum to augment its usefulness.

Recommendations

- 1) *Revise and clarify the objectives of the Guanaquín.*

For example, currently, one of the primary stated objectives of the supplement is to create an environmental/ecological conscience among students. This objective overlooks the possibility that most likely already possess some level of awareness and knowledge about environmental problems. The objective should be modified so that the purpose of the supplement is to enhance students' base level of environmental awareness.

- 2) *Better correlate the supplement's subject matter with the formal school curriculum to encourage teacher use of the Guanaquín in the classroom.*

This is particularly true for the science, literature and ecology sections of the supplement, which are the most popular among teachers. Subject matter should build upon and complement environmental information students receive at home, school and through "The Children and Us".

- 3) *Plan topics a year in advance.*

As a corollary to the previous recommendation, advance planning will be necessary to coordinate subject matter with the school curriculum.

- 4) *Design the supplement to better target sub-groups of readers identified as priorities by newspaper staff.*

Feedback from teachers, combined with questions about reading comprehension asked of students, suggest that the supplement appears to be better suited for students in grades 4 or greater. To increase use of the supplement among students in grades 1-3, the information generally needs to be simplified. Within a single issue, different sections could be designed to be appropriate for different grade levels of students. Other sections could provide ideas and guidelines for teachers. Teachers' school administrators' input may be necessary in order to tailor the material to specific grade levels.

In addition, there is a need to target parents. Given that the supplement largely used by

students at home, greater parent interest could enhance student use of the supplement as well as favorably impact parents.

The supplement can be promoted to other groups and organizations, such as zoos, etc., if a concerted effort is made to target them.

- 5) *Develop clear objectives for each environmental issue of the supplement including designating the target audience and the desired learning outcomes for that topic.*

It is important not only to tailor the information to a specific audience but also to include measurable objectives in order to evaluate the impact of the issue on the readers.

- 6) *Standardize the format for presenting environmental problems.*

Presentation of material in the supplement should be standardized in such a way as to provide a definition of the topic/problem, a clear explanation of the implications of problem for the environment, and specific actions students can take to ameliorate the problem. In each case, topics should be relevant to students' lives and actions able to be carried out at home or in school. Learning objectives should include corresponding measurable outcomes.

- 7) *Concentrate on a "hands on" approach to learning which develops problem-solving capacities, rather than a didactic, text book model.*

The supplement should maintain its emphasis on developing student skills through a dual focus on: 1) hands on, experiential learning and 2) development of cognitive skills and more abstract, theoretical thinking. Students should develop a core set of problem solving skills that can be applied to other environmental problems. It is essential that knowledge/problem definition sections of the supplement are followed up by complementary exercises and activities for students.

The supplement should also continue to maintain a playful approach to learning, or "info-tainment" which draws children in of their own accord. No attempt should be made to closer emulate the didactic model of *The Children and Us*.

- 8) *Provide more instructions for teachers on how the supplement can be used in the classroom.*

Besides targeting certain sections of the supplement to teachers, a special teacher guide book could be developed.

- 9) *Clarify and expand instructions that accompany the activities, and especially the experiments, to facilitate student comprehension.*

Many students reported difficulty understanding some of the directions in the *Guanaquín*. A concerted effort should be made to simplify the text.

- 10) *Endow the characters used in the Guanaquín with greater personality and a more active role in the narrative.*

Characters, as in other successful comic books, need to take a more active role in story telling. They should have distinct personalities and act out desired environmental behaviors thereby serving as models for students. As currently conceived, they are strictly decorative in function.

- 11) *When designing the supplement, devote special attention to insuring the background colors do not obscure the text.*

Caution should be exercised so that form does not take precedence over content. Many student had difficulty reading text over the background colors, particularly white letters on a blue background.

- 12) *Institute a mechanism to regularly monitor readers' perceptions of the supplement.*

Regular contact with teachers is especially important to both receive their suggestions for making the supplement more useful and to reinforce their use of the supplement. Teachers who are not using the supplement in their classes should be asked why.

Guanaquín staff has begun to visit schools during environmental week. Outreach activities such as these should be expanded. A formal mechanism for obtaining and documenting feedback gathered during outreach efforts should be created.

- 13) *Develop an incentive/reward strategy for students and teachers that will provide them with public recognition for their efforts and accomplishments.*

This has already begun with development of *Guanaquín* clubs for students. Students send in coupons to become members. They are congratulated in the supplement on their birthdays. However, the unreliability of the postal system has compromised the success of the club as many membership requests are lost in the mail. One possible solution would be to have students drop their requests at the distribution points for the supplement.

Several contests for students have also been held, which were very popular and generated enthusiasm among readers.

An incentive system for teachers, if instituted, could also serve to heighten their enthusiasm for and use of the supplement. Teachers should be rewarded for their work.

Readers, both adults and children, appear to enjoy seeing their names in print. The “Letters to the Editor” section is very popular, and the students like being recognized on their birthdays.

RESULTS FOR STUDENTS

Obtaining and Reading the *Guanaquín*

The majority of student respondents have read the *Guanaquín*, with no significant difference by gender. Of the total sample of 267 students surveyed, 83% (222) stated that they have read the *Guanaquín*. No significant differences emerged by gender, location and type of school, and urban/rural setting.

Of the 212 responding students who have ever read the *Guanaquín*, the approximate numbers of issues they recall reading, out of a total of 72 issues, follows in Table 1. Results were similar when examined by sex and location, type and setting of the school.

Table 1: Student Readership of the *Guanaquín*

Number of Issues Read	n	%
1 issue	7	3%
2 to 5 issues	76	36%
6 to 10 issues	108	51%
11 + issues	21	10 %

Additional questions were designed to determine if the cost of the *Guanaquín* is a constraint to obtaining the supplement among students and their families. The forty-three students who reported they did not read the *Guanaquín* where asked to explain why. The primary reason identified for not reading the *Guanaquín* is that their family does not buy the Sunday paper (54%). These results were similar for both provincial areas and the San Salvador area. There were differences between males and females, but they were not statistically significant: 44% of male students (n=8) versus 60% of female students (n=15) reported their family does not buy the Sunday paper. Another 28% of students said they do not have enough money to purchase the paper. A significantly greater percentage of male students (50%, n=9) than female students (12%, n=3) reported they do not get the supplement because their families cannot afford it ($p < .01$). Sample sizes were too small to further explore differences between public and private schools and schools in urban versus rural settings.

Table 2: Most Common Ways Students Obtain the Newspaper

Way of Obtaining Newspaper	n	%
Purchasing it	164	74%
Borrowing or receiving it as a gift from		18%
borrow	25	11%
free gift	14	6%
Sometimes borrow and sometimes buy	19	9%

Most students reported purchasing the supplement by a noteworthy percentage relied on obtaining it free of charge through borrowing it or having it given to them by others. This did not differ by gender or location, type and setting of the school.

Use of the *Guanaquín*

Among the different ways the 221 students reported using the *Guanaquín*, four are highlighted in Table 3.

Table 3: How Students Use the *Guanaquín*

Way of Using the Supplement	n	%
Studied with the supplement	150	68%
Did the games and exercises	46	21%
Read the stories	23	10%
Read to siblings	2	1%

Studying with the *Guanaquín* is done more often by children from provincial cities (74%) than by children from San Salvador and its surrounding area (60%) ($p < .05$).

The survey also asked 187 students where the *Guanaquín* is most often used. The supplement is most commonly used in the home (80%), and secondly in the classroom (3%). 17% of students used it in both places, bringing household use up to 97% and classroom use to 20%.

In the home, students were further probed, what is done with the environmental issues of the *Guanaquín*?

This question was answered by the 181 students who reported using the *Guanaquín* only at home or both at home and at school. The 3% of students (n=4) who only used the supplement at school were excluded from this question. In many cases, students gave more than one answer. Results are provided in Table 4.

Table 4: How Students Used Environmental Issues of the *Guanaquín* at Home

Uses at Home	n	%
Homework	112	62%
Games/entertainment	135	75%
Collect/scrap books	95	53%

Students in urban areas were significantly more likely than those in rural areas to make a scrap book ($p < .05$). No differences by gender were observed.

Those students who reported they had used the *Guanaquín* (n=222) were asked if they had ever used the supplement to study environmental topics. The various themes on the environment were studied by the students with the varying degrees of frequency as shown in Table 5. The majority (84%, n=187) responded they had used it at least once. Results did not differ by sex. A breakdown by frequency of use is provided in Table 5.

Table 5: Frequency Students Studied Environmental Topics in the *Guanaquín*

Frequency Studied	n	%
Once	82	37%
Several times	86	39%
Frequently	19	9%
Never	35	16%

These results did not differ by sex, location of school or rural/urban setting.

The survey also listed ten different environmental topics covered by the *Guanaquín* and asked students which ones they had studied. These results are based on a subset of 183 students, since 45 of the original 267 students were required to skip until the first question about The Children and Us since they had never read the *Guanaquín*, and 35 students answered they had never used the environmental

issues, and 5 did not respond whether or not they had used any of those issues. The percent of students who studied each of the ten topics follows in Table 6.

Table 6: Environmental Topics Students Studied

Environmental Topic	n	%
Pollution	131	72%
Trash	103	57%
Deforestation	93	51%
Plants and Animals	76	42%
Recycling	50	28%
Energy	47	25%
Ecosystem	38	21%
Noise	34	19%
Earth Day	27	15%
Unicef	20	11%
Don't recall	1	1%

Students from schools in urban areas studied deforestation more often than their rural counterparts. A higher percentage of public school students studied energy and noise than did private school students ($p < .03$). Gender differences were not detected.

Preferences

Students were asked their opinions regarding the quality, content and color schemes of the graphic illustrations included in the supplement.

1) Opinions of Characters

Students were asked to examine one of several issues of the *Guanaquín* and indicate which character they liked the most ($n=219$), liked the least ($n=172$) and to explain why. This question was asked in order to determine if there were any characters students generally disliked. Multiple responses were allowed by the survey instrument even though the questions were phrased as “most” and “least”.

Table 7: Characters Students Liked

Character	Character you like the...				
	Most		Least		Significant differences
	n	%	n	%	
The boy	39	18%	3	2%	Dislike: Urban=0%,Rural=14% Missing=0% (p<.001)
The girl	32	15%	13	8%	Dislike: Male=12%, Female=3% (p<.05)
The Guanaquín	116	53%	13	8%	
The toad	36	16%	29	17%	
The turtle	40	18%	8	5%	Like: Urban=22%,Rural=4% Missing=0% (p<.05)
The bird	55	25%	15	9%	
The sun	27	12%	4	2%	
The pencil	36	16%	16	9%	Dislike: Male=16%,Female=3% (p<.01)
The worm	35	16%	41	24%	
Write-ins included a large number of responses for:					
The fish	1	1%	15	9%	Dislike: Male=3% ,Female=10% (p<.05)
The cockroach	0	n/a	8	5%	Dislike: Urban=2%, Rural=21% Missing=0% (p<.001)

The Guanaquín is the most popular character among students, with the bird the second most favored. Urban students identified the turtle as their favorite character more often than rural students. A higher percentage of students from San Salvador than the provinces liked the camel.

Several characters were not well liked by some students. Rural students more often disliked the cockroach and the boy characters than did urban students. Boys more frequently disliked the pencil and female characters than girls, while girls more often disliked the fish than boys.

The ant, oyster, fish, deer and camel were not mentioned by many students as being liked or disliked.

2) The Color and Drawings

As part of the survey, students were asked to examine one of seven different environmental issues of the *Guanaquín* (Trash, Pollution, Recycling, Deforestation, Ecosystems, Energy, and Noise) and comment on the illustrations, both in terms of color and quantity. The majority (89%) of 222 student respondents felt the colors used in the sample supplements were good. Eighty-two percent of 220 students also felt that the supplement has sufficient drawings. No differences in opinion by gender and location or rural/urban setting of the school or grader were apparent.

3) Games, Activities and Experiments

All of the 214 students who read the *Guanaquín* said they liked the games, activities and experiments. However, in many cases students needed further clarifications. Male students had more trouble understanding the experiments than female students ($p < .05$). An analysis of the differences by location suggests that students from the provinces have more difficulties understanding crossword puzzles than students from San Salvador ($p < .05$). Students in urban areas more often reported needing help with questions, fill-in -the-blanks and experiments than students from rural areas ($p < .01$). A higher percentage of rural students had trouble with the games. A significantly greater percentage of students from public than private schools had problems with the mazes ($p < .05$). Table 8 provides the percentages of the 216 students who reported they needed additional help by the type of game or activity that was difficult to understand.

Table 8: Activities and Games Students Needed Help Understanding

Activities and Games	n	%
Experiments	117	54%
Mazes	100	46%
Answer questions	98	45%
Games	96	44%
Crossword	91	42%
Complete the drawing	90	42%
Fill in the blank	64	30%
Word search	6	3%

Despite the fact that many students reported having problems comprehending certain activities, when asked in a separate question whether the instructions for the activities were generally sufficiently clear, three quarters of the students replied they were. This did not vary between lower grades (1-3) and

upper grades (4-6).

Among the 52 students who said the instructions were not clear, the principle reason provided was that they were not able to be easily followed (81%). The next most common answer, that they could not understand what was written, was given by only 10% of the students who had trouble.

Self-Reported Clarity of Supplement's Text

In one question in the survey, 83% of the 219 respondents said there was enough text. 90% of students who said they read the *Guanaquín* stated that all the paragraphs were readable; but this percentage was shown to be smaller in the separate reading test administered to second through sixth grade students. For this item, the question asked whether the students had trouble reading the text over the background color in the supplement they were asked to read, and, if so which supplement and which paragraph. No students indicated a problem with trash, pollution, recycling, or energy. However, problems with other issues emerged. Table 9 below provides percentages for students who had trouble with at least one paragraph by topic of the supplement.

Table 9: Environmental Issues Students Had Trouble Understanding

Issue	Number Who Read Issue	Percent of Readers Who Had Trouble Understanding
Deforestation	26	19%
Ecosystem	5	22%
Noise	19	5%
Water pollution	15	7%

Reading Test Results

The reading test, administered to a subset of students from the evaluation survey sample, was given to 31 students in the primary grades, from 2nd through 6th. A sample of 23 students from the secondary grades, 7-9, took a similar test with different reading selections. All students were asked to read aloud excerpts from an “easy” environmental issues of the *Guanaquín* to test their reading ability. To test their comprehension of the material, students were asked to identify one main point from the “easy” passage. Students were also asked to read a second excerpt from a “hard” environmental issue of the supplement and identify one main point. Students were asked several additional questions about their

readership and use of the *Guanaquín* in general.

1) Reading Comprehension of the *Guanaquín*

Results of the reading test, as shown in Table 10, reveal that the higher the grade the higher the percentage of students that could read the selection well. Due to the small sample size, there were no measurable statistical differences in reading ability by sex, residence, school type, grade group, or past reading or use of the *Guanaquín*.

When asked to state a main point from each of the two reading samples, the majority of the students in the **primary** grades identified one of the main points of the “easy” selection, and every student was able to state at least one main point from the “hard” selection, as shown in Table 11.

When asked to identify a main point from the two sample issues, three quarters of students in the **secondary** grades, 7 through 9, could identify a point from the first “easy” selection, and over 90% could identify a point from the second “hard” selection on water, as shown in Table 11.

Table 10: Reading Ability Among Students

Reading Ability	Grades 1-3 (n=14)		Grades 4-6 (n=17)		Grades 7-9 (n=24)	
	n	%	n	%	n	%
Poor	4	28%	1	6%	0	0%
Fair	4	29%	4	23%	5	22%
Good	6	43%	12	71%	18	78%

Table 11: Students Able to Identify One Main Point From Reading Samples

Sample Issue	Grades 1-3 (n=14)		Grades 4-6 (n=17)		Grades 7-9 (n=23)	
	n	%	n	%	n	%
“Easy” reading selection	12	86%	16	94%	17	74%
“Hard” reading selection	11	79%	17	100%	23	96%

2) Use of the *Guanaquín*

Other results from the reading test show that over two thirds of the students in the lower grades have read the *Guanaquín*. Slightly less than one quarter have used or worked with it often, while another quarter have never worked with it. The numbers of students who have never worked with the *Guanaquín* were slightly greater among second and third graders than fourth, fifth and sixth graders.

Among students in the upper grades, all but one had previously read the *Guanaquín*. Only 2 students had never worked with the supplement, while just over half had worked with it a few times, and one third had worked with it many times.

3) Preferences and Clarity

The fact that nearly half of the students from lower grades had a problem with reading the text, 7% found the text font size too small, and 10% felt the form was difficult to read indicates a greater problem with text exists than the 90% of students who reported that all the paragraphs were readable during the student survey indicates. Half of students indicated that they prefer drawings in the middle of the text, while slightly fewer prefer them to be separate.

Older students were asked if the colors used in the supplement interfere with the clarity of the text, and were fairly evenly divided between those who answered yes and those who answered no. Students generally felt the font size was legible, the number of drawings sufficient, and the placement of paragraphs to be good/readable.

The Children and Us

Of 263 children, 78% have seen *The Children and Us*. 58% of those 204 respondents who have seen it have used it at home, 26% in the home and at school, and 15% in school alone.

Of the environmental topics these pages have treated, students were asked if they had ever used any of six different issues, with an “other” category for the 204 students to write in any additional issues not included in the prepared list. A total of 148 students’ reported using one of the environmental issues and their responses are included in Table 12. Responses did not differ by gender.

Table 12: Environmental Issues of *The Children and Us* Students Have Used

Theme	n	%
Contamination	80	54%
Animals	74	50%
Deforestation	72	49%
The food chain	48	33%
Land conservation	46	31%
Food	42	29%

In the opinion of most of the 191 children who have ever read both *The Children and Us* and the *Guanaquín*, the former supplement is more useful to most students for their studies than the *Guanaquín* (60% versus 40%). The reasons 96 students preferred *The Children and Us* are provided in Table 13.

Table 13: Reasons Students Prefer *The Children and Us* to the *Guanaquín*

Reasons	n	%
The information given complements materials the student sees	56	58%
Follows the program	43	45%
Treats more interesting themes	31	32%
Gives more direction of what student is able to do	26	27%
Drawings and explanations are for children	24	25%
Uses vocabulary that is much easier to read/understand	23	24%
Has more exercises and games	17	18%

In general, *The Children and Us* appears follow the students' curriculum in the schools more closely, than the *Guanaquín* does.

Both supplements are used more often by students at home than in school. It would appear that more needs to be done to motivate teachers to use these supplements in the school.

RESULTS FOR TEACHERS

The investigation permitted us to obtain teacher data regarding use, acquisition, price acceptance and grades in which the sections of the *Guanaquín* were used. Additionally, data were obtained about knowledge and use of the supplement.

Obtaining and Reading the *Guanaquín*

Of the 58 teachers interviewed, 86% reported that they have read the *Guanaquín*: 72% of males and 93% of females have read it, which was a significant gender difference ($p < .05$). Among those who have read the supplement, the quantity read is provided in Table 14. The sample size was too small to examine differences by gender, rural/urban setting of school and type of school.

Table 14: Teacher Readership of the *Guanaquín*

Number of Issues	n	%
1 issue	0	0%
2 to 5 issues	4	12%
6 to 10 issues	10	30%
11 issues or more	19	58%
All issues	10	30%

The most common way of obtaining the paper is by purchasing it (60%). Other teachers obtained it for free (4%) and by borrowing it (11%). Approximately one quarter of teachers (23%) either borrowed or bought the supplement.

The majority of teachers (74%) who use the *Guanaquín* in class believe the price is appropriate, but 21% think it is too expensive. There were no differences by sex, residence or school type for teachers regarding the cost and purchasing of the *Guanaquín*.

Teachers further indicated that many parents cannot afford to purchase the newspaper regularly. When teachers were asked if a few, half, or a majority of their students' parents are able to buy the *Guanaquín* every week during the school year, almost half (43%) said only a few parents were able to do so. Another 29% of teachers said most parents could buy the newspaper every week, while 2%

said half of the parents could but it. However, 26% of the teachers did not respond to the question.

Among teachers who think the price of the *Guanaquín* is too expensive, 71% think the majority of parents are able to obtain it every week regardless. In contrast, of those teachers who believe the price is appropriate or should be raised, only 29% believed that most parents were able to obtain the supplement every week ($p < .08$). Teachers in private schools more often than those in public schools believed that only half or less of parents were able to secure a copy of the supplement every week ($p < .05$).

Use of the *Guanaquín*

Overall, 53 teachers used the *Guanaquín* in class with varying frequency, as shown in Table 15.

Table 15: How Often Teachers Have Used the *Guanaquín*

Frequency	n	%
Once	15	28%
Several times	17	32%
Frequently	10	19%
Never	11	21%

Teachers were provided with a list of different sections of the *Guanaquín* and asked to indicate for which grade level they felt each section was most appropriate. Teachers generally believed that some sections of the *Guanaquín* were better suited for certain grade levels than others. However, as can be seen in Table 16, most teachers believed that the various sections are best suited for 6th grade students.

Table 16: Teachers' Perception of Suitability of Sections of the *Guanaquín* by Grade

<i>Guanaquín</i> Section	N*	Grade Level							
		1-3		4-5		6		higher	
		n	%	n	%	n	%	n	%
Happy Mailman	41	12	29%	8	20%	16	39%	5	12%
Science	42	3	7%	2	5%	27	64%	10	24%
Ecology	42	0	0%	4	10%	25	60%	13	31%
Literature	41	4	10%	5	12%	26	63%	6	15%
You ought to know	34	1	3%	4	12%	20	59%	9	26%
Games & Activities	40	4	10%	1	3%	27	68%	8	20%
Sports	40	1	3%	0	0%	26	65%	13	33%

* Of the 42 teachers allowed to respond

-- no teacher chose this grade

In fact, no teacher found the *Guanaquín* difficult to read, some found it to be of “medium” difficulty (31%) and the majority (69%) found it easy to read. There were no differences by sex, urban location or school type. Those teachers who felt the material was somewhat difficult most often mentioned that the vocabulary/concepts used were too complex (6 teachers) and/or the text was difficult to read over the background colors (5 teachers).

96% of teachers taught about at least one environmental topic in one of grades one through six, with the distribution of percentages of teachers teaching each theme ranging from 63% (food conservation) to 91% (water pollution).

Teachers' were asked whether or not they had used a list of ten different environmental themes from the *Guanaquín* in the classroom, or any others not included in the prepared list. The results are based on a denominator of 42 teachers since, of the original 58 teachers, 11 are required to skip until the first question about *The Children and Us* based on their stating they never used the *Guanaquín* in class,

and 5 of the remaining teachers did not indicate if they used the environmental themes in the *Guanaquín* (64% of all teachers stated they do use it for environmental topics). Table 17 provides a breakdown by issue.

Table 17: Environmental Issues of the *Guanaquín* Teachers Recall Using

Issue	n	%
Trash	28	67%
Pollution	28	67%
Deforestation	28	66%
Plants and Animals	23	55%
Water Pollution	22	52%
Ecosystem	18	43%
Recycling	14	33%
Energy	13	31%
Noise	13	31%
Earth Day	7	17%
UNICEF	5	12%

Results suggest that female teachers use a greater number of environmental topics in the classroom than male teachers do. Significantly more female teachers than male teachers used *Guanaquín* supplements on trash ($p < .05$), plants and animals ($p < .001$), water pollution ($p < .01$), and pollution/soil conservation ($p < .01$).

Significantly more teachers in San Salvador than in provincial areas used the *Guanaquín* supplements on trash ($p < .05$), plants and animals ($p < .001$), and water pollution ($p < .05$). In addition, private school teachers were more likely to use the water pollution issue than public school teachers ($p < .05$).

The 37 teachers who used the environmental *Guanaquín* supplements in the classroom reported using them in several different ways, as illustrated in Table 18.

Table 18: Ways Teachers Used Environmental Issues of the *Guanaquín*

How Teachers Use Issues	n	%
Read in group and afterwards have a discussion or group work	22	60%
Read in class and comment	22	60%
Make a mural with the pages	15	41%
Ask students to talk with their parents	15	41%
Buy for the students and ask them to do the exercises	11	30%
Other	6	16%
Photocopy and give to class for work	4	11%
Nothing in particular/mention to students	1	3%

The connection between how teachers used the supplement with their students and the type of topic used was explored. Teachers who have used the *Guanaquín* issue on water pollution were significantly more likely to suggest that their students talk with their parents ($p < .05$) than teachers who did not use that issue. Those teachers who reported using the issue on plants and animals more often had their students make a mural with the pages than other teachers ($p < .01$).

Preferences

Teachers were asked about sections they found most useful and what could be done to help them use the *Guanaquín* more. They were also asked how much they think students liked the *Guanaquín* and what could be changed to make it more clear, attractive, and accessible to students.

1) Teacher Section Preferences

The 42 teachers who had used any issues of the *Guanaquín*, not just environmental issues, in the classroom were also asked to indicate which section of the supplement, from a list of seven, was the most useful and easily applied in the classroom and why. Teachers preferred several sections for a variety of reasons. These were then collapsed into two categories, those pertaining to content and

those pertaining to style. Results are outlined in Table 19 below.

Table 19: Reasons Teachers Preferred Certain Sections of the *Guanaquín*

Section of Supplement	Content (Aids / Applicability)		Style (Presentation / Games / Kids Like It)		No Reason Given	
	n	%	n	%	n	%
Literature	13	29%	0	10%	14	33%
Science	12	31%	4	0%	11	26%
Ecology	12	29%	1	2%	11	26%
Games & Activities	1	10%	1	7%	5	12%
Sports	3	12%	1	0%	4	10%
You Ought to Know	4	7%	3	2%	11	26%
Happy Mailman	5	2%	0	2%	6	14%

The literature, science and ecology sections are generally the most useful to teachers due to content, aids and applicability. “Happy Mailman” and “You Ought to Know” were not as often cited as the easiest to use, but may still be useful to teachers.

The most frequently cited suggestions for other uses for the *Guanaquín* were augmenting the curriculum (14%), collecting (9%) and keeping for consultation (7%).

Teachers were asked their opinion about three proposed ways of modifying the curriculum to increase usage of the supplement, and to offer any additional suggestions. Teachers from urban schools and private schools significantly more often advocated correlating the supplement with the standard school curriculum than teachers from rural and public schools. Responses are included in Table 20.

Table 20: Teachers' Suggestions About Ways of Improving the *Guanaquín*

Suggestion	n	%
Put a guide in it	20	48%
Correlate it more with the curriculum	23	55%
Reduce the size, too big/much	14	33%
Include question and answer section	1	2%
Create a textbook	1	2%

Teachers were also asked what other environmental topics they would like to see covered. Very few teachers responded to this question, but their answers include:

- < the ozone layer
- < environmental protection & maintenance
- < air pollution
- < how pollution causes illness
- < water pollution by hydrocarbons, river use, and demographic problems

2) Perceived Student Preferences

An overwhelming majority of teachers who use the *Guanaquín* (93%) believe that students support the use of the *Guanaquín*, and, of them, 97% think students enthusiastically use it. There were very few suggestion teachers gave to improve attractiveness and make it more clear for students, but they include changing the paper to make it easier to collect and save, and changing the colors for better visibility or to make it more visually attractive. Also, they suggest making it better for different ages, adding more instructions, better promotion, more ecology issues, and cutting down on comic strips to give it more room.

The Children and Us

Of all the teachers, 76% know about the Tuesday/Thursday *The Children and Us* supplement and, of them, 89% have used it in the classroom for environmental themes.

Of the environmental themes these pages have treated, those that have been used by the 39 teachers

who use the supplement are outlined in Table 21. Pollution was the most often used issue. All teachers (n=27, 100%) from provincial areas had used this issue while significantly fewer from the San Salvador area had used it (n=16, 81%). The sample size was too small to make comparisons by gender and public versus private schools.

Table 21: Environmental Topics from *The Children and Us* Teachers Have Used

Topic	n	%
Pollution	36	92%
Deforestation	29	74%
Land conservation	27	69%
Food	22	56%
Animals	21	54%
The food chain	20	51%

In the opinion of the teachers who have ever read both *The Children and Us* and the *Guanaquín* (62%), 42% feel the former supplement is more useful for their studies than the *Guanaquín*, and 19% feel they are equally useful. Reasons for the higher utility of each are included in Table 22.

Table 22: Reasons Teachers Prefer the *Guanaquín* or *The Children and Us* or Like Both

Reason	Guanaquin		Children & Us		Both	
	n	%	n	%	n	%
Follows the program	5	14%	12	33%	0	0%
Uses vocabulary that is much easier to read/understand	5	14%	7	19%	0	0%
Has more exercises and games	5	14%	3	8%	1	3%
Treats more interesting themes	7	19%	5	14%	3	8%
Gives program materials I can use	3	8%	7	19%	2	6%
Drawings and explanations are for children	6	17%	7	19%	1	3%
The information given complements my materials	8	22%	9	25%	2	6%
Gives more direction of what I can do with students	2	6%	5	14%	1	3%

The Children and Us appears to provide more instructions for the teachers, as well as follow the students' curriculum in the schools more closely (as reported by students), than the *Guanaquín* does. The numbers were too small to determine any differences in opinion by gender, location, or setting of school.

APPENDIX A: STUDENT SURVEY

GUANAQUÍN STUDENT QUESTIONNAIRE

Code____
El Salvador

INTERVIEWER:_____

October_____1995

Grade:____ Age:____ Sex: M__ F__

Name of School:_____ Public____, Priv.____
Urban____, Rural____, Unknown____

City, Municipality, Neighborhood_____

1. Have you ever read Guanaquín?

Yes____ (go to question 2) No____ (go to question 3)

2. (If you have read it) About how many issues have you read?

____All ____Various This Quantity:____

____Don't remember (go to question 4)

3. (If you have not read it) Why have you not read Guanaquín?

____too difficult to obtain when published

____do not buy Diario de Hoy newspaper in my home on Sundays

____no money to buy supplement

____not interested/I hate reading

____other reason:_____

KNOWLEDGE ABOUT THE ENVIRONMENT

4. Have you ever had any class/course on the environment?

Yes___(go to question 5) No___(go to question 6)

5. (If yes) What topics did you cover in that class on the environment?

___ Don't remember	___ Air pollution
___ Conservation of natural resources	___ Flora and fauna
___ Environmental deterioration	___ Food preservation
___ Deforestation	___ Garbage/Soil contamination
___ Water pollution	
___ Other:_____	

RECOGNIZING GUANAQUÍN

(If you have read Guanaquín, continue with question 6. If not, go to question 32 on page 8.)

6. Of the Guanaquín supplements that you have read, did you buy them, did someone lend them to you, or did you get them for free?

Purchased ___ Some borrowed, some purchased ___
Borrowed ___ For free ___
Don't remember ___

7. What have you done with Guanaquín? (Read the options)

___ have used it to study
___ have used the games and exercises
___ have read the stories
___ have written to the newspaper
___ have read it to siblings
___ other:_____

8. Have you studied the environment using Guanaquín, once, several times, frequently, never?

Once ____
Several times ____
Frequently ____
Never ____

9. (If you have studied the environment), What topics did you study? (Read the choices)

____ Waste ____ Energy
____ Pollution ____ Plants/Animals
____ Earth Day ____ Noise
____ Recycling ____ UNICEF award
____ Deforestation ____ Don't remember

12. Do you use Guanaquín at school or at home?

- ☐ at home (go to question 14)
- ☐ classroom (go to question 13)
- ☐ don't remember (go to question 15)
- ☐ none (go to question 15)

13. How did you use Guanaquín in class? (Read the options)

- ☐ Read it in a group and had group discussion
- ☐ Teacher asked me to take to class and do exercises
- ☐ Teacher had us do mural
- ☐ Put to practice the exercises
- ☐ Teacher read and spoke about it/dictated from it
- Other activity: _____

14. (If you used it at home), How was Guanaquín used?

- ☐ Do homework ☐ Clippings/collections
- ☐ Play ☐ No special way
- ☐ Don't remember

Other: _____

15. Did you talk about Guanaquín with someone in your family or with friends and neighbors?

- NO _____ (go to question 16)
- YES _____ With whom?
 - Dad _____
 - Mom _____
 - Siblings _____
 - Neighbors _____
 - Friends _____

OPINIONS ABOUT GUANAQUÍN

PICTURES/CHARACTERS

16. Do you like the characters in Guanaquín?

☐ Yes ☐ No ☐ More or less ☐ No opinion

17. Which one do you like best?

<input type="checkbox"/> the boy	<input type="checkbox"/> the birds (parrot)
<input type="checkbox"/> the girl	<input type="checkbox"/> the sun
<input type="checkbox"/> the armadillo	<input type="checkbox"/> the pencil
<input type="checkbox"/> the toad	<input type="checkbox"/> the worm
<input type="checkbox"/> the turtles	
<input type="checkbox"/> all the same	Other: _____

18. Why do you like it more: Don't know why ☐ Just because ☐

Because: _____

19. Which character do you like least?

<input type="checkbox"/> the boy	<input type="checkbox"/> the birds (parrot)
<input type="checkbox"/> the girl	<input type="checkbox"/> the sun
<input type="checkbox"/> the armadillo	<input type="checkbox"/> the pencil
<input type="checkbox"/> the toad	<input type="checkbox"/> the worm
<input type="checkbox"/> the turtles	
<input type="checkbox"/> no opinion	Other: _____

20. Why do you like it least? Doesn't know why ____ No answer ____

Because _____

21. My opinion of (Perceived by me) the colors of the Guanaquín magazine is (are):

(Read opinions once then read one by one and mark)

____ the color is too strong ____ doesn't have sufficient color
____ needs more color ____ I prefer it without color
____ it is good as is

22. Observe the drawings. Is it perceived by you that this Guanaquín has: sufficient, too little or too many drawings?

Write here the theme shown:

____ sufficient
____ too few
____ too many
____ no response/ no opinion[/not specified]

CLARITY OF THE TEXT

23. Is it perceived by you that the Guanaquín magazine has, too much, sufficient, or too little paragraphs (phrases, text)? (Read and mark the opinion)

____ a lot of text/paragraphs/phrases
____ sufficient, good as is
____ too few
____ no response/no opinion

TEXT DISTRIBUTION

24. Look at the background color and the paragraphs written on all the pages of this Guanaquín. Is there any paragraph that you are not able to read because the color of the background doesn't let you see the letters?

Write here the title of the Guanaquín shown:

___ all of the paragraphs can be read

___ not able to read paragraph(s) number ___ of
column(s) ___ of page(s) ___

25. DELETED FROM FINAL SURVEY

EXERCISES

26. Is it liked by you that the Guanaquín magazine has games, activities and experiments?

___ Yes ___ No ___ all the same to me ___ no opinion

27. With which of the games and experiments is the one that you needed the most help to understand?
(Give description and mark those mentioned)

___ crossword
___ dot-to-dot
___ games
___ questions
___ fill in the blank
___ maze
___ word search
___ experiments

___ Other: _____

28. How many of the games, activities and experiments have you done? (Read choices)

- ☐ the majority
- ☐ only a few
- ☐ none (skip to question 32)

29. The instructions or explanations of how to do the activities, games or experiments are: (read and mark)

- ☐ sufficiently clear (skip to question 31)
- ☐ very few are clear
- ☐ some are clear, some are not
- ☐ no opinion [no response] (skip to question 31)

30. Why are they not clear?

- ☐ don't understand what was written
- ☐ not able to easily follow
- ☐ no response
- ☐ Other reason: _____

31. Do you have saved in your house or at school a Guanaquín magazine?

- ☐ No
- ☐ Yes
- ☐ Don't recall

PAGES "THE CHILDREN AND US"

32. Have you seen the pages "The Children and Us" of the Diario de Hoy which are published on Tuesdays and Thursdays?

- ☐ Yes
- ☐ No (terminate the interview)

33. Have you used it in school or at home or both places?

- ☐ in school
- ☐ at home
- ☐ both places
- ☐ haven't used

34. Have you used them at school or in the house?: (Many times, a few times, never)

___ many times ___ a few times ___ never (terminate interview)

35. Why have you used it (read and mark those mentioned)

___ Resolve problems ___ Consult
___ Make writings ___ Make presentations
___ Make collections ___ Study for exams
___ Make copies
___ Other: _____

36. Have you used any of the pages of “The Children and Us” to treat the theme of the environment?

___ haven’t used any (skip to question 38)
___ yes have used

37. Which of the environment have you used? (Read and mark)

___ Conservation of soil ___ Pollution
___ Deforestation ___ Food chain
___ Animals ___ Food
Other: _____

38. Which have you utilized more, the Guanaquín magazine or the pages “The Children and Us”?

___ the Guanaquín magazine ___ the pages “The Children and Us”

39. For which reason did you use ____? (That mentioned before (response to question 38))

- ☐ Because it follows the program
- ☐ Because it uses a vocabulary that is very easy to read and understand
- ☐ Because it has many activities and games
- ☐ Because it treats more interesting themes
- ☐ Because the drawings and explanations are for children
- ☐ Because the information it gives complements the materials I see (in class)
- ☐ Because it brings direction to what I am able to do
- ☐ Other: _____
- ☐ No opinion

APPENDIX B: STUDENT READING TESTS

PRIMARY GRADES STUDENT READING TEST

El Salvador

Code ____

October ____ 1995

INTERVIEWER: _____

Name of School: _____ Public ____, Priv. ____

Urban ____, Rural ____

City, Municipality, Neighborhood _____

Grade: ____ Age: ____ Sex: M__ F__

THEME: ANIMALS AND PLANTS (SECTION: LITERATURE, P. 5)

Have you read the Guanaquín? Yes ____ No ____

Have you ever used/worked with the Guanaquín?

A few times ____ Many times ____ Never ____

READING ABILITY

1. Please read to me in a loud voice the complete text, "Spirit of the Trees."

Read unbroken, without stumbling ____

Read slowly, but with understanding ____

Read with difficulty, stopping ____

Not able to finish ____

Will not read ____

IDEAS

2. Tell me, in your own words, what the main idea/theme of the story, "Spirit of the Trees" is (do not allow them to look at the text again).

Leaves give life to the trees. ____

Fallen leaves are buried to be made into fertilizer. ____

Fertilizer is given to trees to make it grow new leaves and to live. ____

Leafy trees are home to birds and give life to the garden. ____

The garden produces happiness in children. ____

Other: _____

THEME: ANIMALS AND PLANTS (SECTION: YOU OUGHT TO KNOW)

3. Please read to me in "They Also Talk" the column about the lion, skunk, elephant and seal and tell me what ideas you get from the story.

The animals communicate with their own language.

Complete ____ Incorrect ____ Half right ____ Not mentioned ____

Animals tell each other how they feel and what they need.

Complete ____ Incorrect ____ Half right ____ Not mentioned ____

Lion: the lion roars strongly against his enemies and softly with his cubs.

Complete ____ Incorrect ____ Half right ____ Not mentioned ____

Skunk: Fear makes him shoot a disagreeable scent.

Complete ____ Incorrect ____ Half right ____ Not mentioned ____

Elephant: Makes a trumpet sound when angry or unsettled. His noise can be heard for several kilometers.

Complete ____ Incorrect ____ Half right ____ Not mentioned ____

Seal: His call is like the bleating of a sheep, it serves as a call to his brothers.

Complete ____ Incorrect ____ Half right ____ Not mentioned ____

Other: _____

TEXT

4. Do you think the articles use too many, enough, or too few paragraphs to say what they want to say?

Too much text ____

Enough ____

Too little ____

No opinion ____

5. Can you indicate in the two sections if there was any difficulty knowing where the beginning and end were.

Correctly indicates where it starts ____

Starts well but loses direction ____

Lost the whole time ____

Starts at the wrong spot ____

Doesn't respond ____

6. Can you tell me if the font size is sufficiently large, or too small to read easily.

Sufficiently large ____

Very Small ____

Indifferent ____

No opinion ____

7. The placement of paragraphs is clear, easy or difficult for reading.

It's a clear form ____

Easy to read ____

Difficult to read ____

No opinion ____

Why? _____

8. Do you prefer paragraphs in columns or like a letter?

This is how I like it (columns) ____

Like a letter ____

I don't care one way or the other ____

No opinion ____

9. Do you prefer drawings separate from the text like in "The Spirit of the Trees" or in the middle of the text like "They Also Talk"?

Separate ____

In the middle ____

It's all the same to me ____

No opinion ____

SECONDARY GRADES STUDENT READING TEST

Code____

El Salvador

October_____1995

INTERVIEWER:_____

Name of School:_____ Public____, Priv.____

Urban____, Rural____

City, Municipality, Neighborhood_____

Student: Grade:____ Age:____ Sex: M__ F__

THEME: ECOSYSTEMS

READING ABILITY (Look: Students ought to be of above third series)

Have you read the Guanaquín? Yes ____ No ____

Have you used the Guanaquín: a few times ____ many times ____ never ____

1. Please read to me in a loud voice the story “Products, Consumers and Decomposers” that appears in this issue: The Natural Balance (Mark their reading capability)

Read unbroken, without stumbling ____

Read slowly, but with understanding ____

Read with difficulty, halting ____

Not able to finish ____

Will not read after beginning ____

IDEAS

2. Can you tell me, in your own words, what is the principle idea of the story that you finished. (Mark the ideas that they say and qualify).

The products: are vegetable which transform minerals in food. (sugar, protein, grease).

Complete ____ Incomplete ____ Half ____

Consumers are animals that eat vegetables and other animals.

Complete ____ Incomplete ____ Half ____

The decomposers: are bacteria and fungus that transform waste to be able to be for new uses.

Complete ____ Incomplete ____ Half ____

Mentions categories (producers, consumers, decomposers) but not able to give concrete ideas about each one ____

Not able to differentiate or make each one____

Didn't respond ____

IDEAS OF SECOND READING

THEME: WATER POLLUTION

SECTION: SCIENCE

3. Please read to me now the experiment, "You want to know if you water is clear," and tell me in your own words what you ascertain happens. (Mark the ideas mentioned and qualify them).

If sample of water has bacteria ____

Complete ____

Incomplete ____

Half ____

If the water is contaminated ____

Not able to give precise any of the ideas ____

No response ____

4. What materials do you request for your test?

Clean plastic bag ____

Rice broth ____

Blue methelene ____

Drinking water ____

Rubber band ____

Kettle ____

Stove ____

Glass bottle ____

Other: _____

Can not recall any ____

5. How do you know if the water is clean to drink?

If the color stays ____

If the color goes, it's contaminated ____

Other: _____

No response ____

TEXT

6. Does it appear to you that these articles have too many, sufficient or a not enough paragraphs in order to say what they want?

Too many ____

Sufficient ____

Not enough ____

No opinion ____

7. Can you indicate in the two articles if there was any difficulty in understanding where you should start and where the lecture ends.

Indicates correctly where the lecture starts ____

Starts good but loses direction ____

Incorrect indication of the start ____

No opinion ____

8. Can you tell me if the size of the letters is sufficiently large, or are the letters too small to read easily?

Sufficiently large ____

Too small ____

Good as is ____

No opinion ____

9. The form how the paragraphs are put is clear, easy/difficult to read.

Is a clear form ____

Easy to read ____

Difficult to read ____

Why? _____

No opinion ____

10. Does it need more drawings for the experiments or are what it has sufficient?

Needs more ____

Are sufficient ____

No opinion ____

11. The color about it which the articles are on impede or not the article.

Don't impede (terminate here) ____

Make it difficult ____

Yes, impede the lecture ____

No opinion (Stop) ____

12. In which paragraph does the color impede the lecture?

Natural Balance article ____

In the paragraph at the bottom of the page on green ____

Other: _____

The experiment with water article ____

The paragraphs in blue with white letters ____

Other: _____

Doesn't indicate any in particular ____

APPENDIX C: TEACHER SURVEY

**TEACHERS
GUANAQUÍN QUESTIONNAIRE
TO TEACHERS**

El Salvador

Code____

INTERVIEWER:_____

October_____1995

Name of School:_____

Public____, Priv____

City, Municipality, Neighborhood_____

Urban____, Rural____

Grade You Teach:_____ Sex: M____, F____

1. Have you ever read the magazine called Guanaquín?

Yes=1 (go to question 2)

No=2 (go to question 3)

2. How many issues have you read?

____All ____ Don't know count Approximately:_____

KNOWLEDGE OF THE ENVIRONMENT

3. Have you received any training in material about the environment?

No __ Yes __

When _____

Where _____

How much time? _____

4. What theme about the environment have you mastered or is the most familiar to you?

Don't remember ____ Natural resources ____ None ____
Trash ____ Flora and fauna ____ Soil contamination ____
Water pollution ____

Other: _____

5. Have you taught any times themes of the environment to your students?

No ____ (skip to question 8)

Yes ____ To what grade(s)? 1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____

6. What theme(s)?

Food conservation ____ Fauna and flora ____
Natural resource conservation ____ Water pollution ____
Trash/ soil pollution ____ Re/deforestation ____
Environmental deterioration ____

Others: _____

7. Do your students have or use some text when they study the environment?

Don't have/use ____ Yes ____ What?(name) _____

RECALL OF THE GUANAQUÍN

8. The examples that you have read of the Guanaquín, did you buy them, get them as gifts or borrow them?

Buy ____ Some buy, some gifts/borrow ____
Borrow ____ Gifts ____ Don't recall ____

9. Have you used some times, several times, frequently, or never the Guanaquín with your students?

Some times ____
Several times ____
Frequently ____
Never ____ (Skip to question 30, page 9)

10. If you have used it, which themes did you use?

Environment ____
Others ____
(If don't mention environment) _____

11. (If mention the theme of the environment...) Which of the themes of the environment have you utilized? (Read and mark all that are mentioned)

Trash ____ Energy ____ Pollution ____
Plants/animals ____ Earth Day ____ Noise ____
Recycling ____ UNICEF awards ____ Deforestation ____
Water pollution ____

Other: _____

12. Do you think that the theme ____ (repeat the theme [teacher first] mentioned in question 11) has anything to do with your real life or that of your students? What, of what form?

Theme: _____

Don't see how ____ No opinion ____

See how this way: _____

13. Of what form do you use this Guanaquín to treat this them of the environment? (Mark the actions that are mentioned that can be included in these. Read choices if can't place precisely an action in particular)

____ Read in group in class and afterwards have a discussion and/or work in group

____ Make the students buy the Guanaquín and ask them to do the exercises that supplement their work

____ Make them make a mural with the pages of the Guanaquín

____ Ask the children to talk about it with their parents

____ Read in class and comment

____ Photocopy and give in class for work

____ Nothing in particular, only mention to students

This other activity: _____

14. What other uses do you suggest to be able to do with the Guanaquín?

No suggestions for additional use ____

Possible uses: _____

REACTION OF THE STUDENTS TO THE GUANAQUÍN

15. If the students use the Guanaquín, do you think that they accept or reject its use?

Students don't use in class ____ (skip to question 18)

Accept ____

Reject ____ (skip to question 17)

16. If they do accept, what type of acceptance? (Read options)

Enthusiastically, clearly, affirmative ____

Have to put pressure on them ____

Somewhat, with reluctance ____

17. If they reject it, why do you think they reject the Guanaquín magazine?

Too expensive ____

Very complicated to read, understand, use ____

Very difficult to get ____

other reasons: _____

SHOW THE GUANAQUÍN AND ASK

18. Which section was the most useful, the one most easily applied in class? (Read the titles after looking at the Guanaquín)

None in particular ____

Happy Mailman ____

Science ____

You Ought to Know ____

Literature ____

Activities/games ____

Ecology ____

Sports ____

Why? ____ No reason given _____

19. Approximately, how many of your students have access to the Guanaquín? (Read options)

The majority ____ Half ____ The minority ____

20. What success of your students from use of the Guanaquín? (Read and mark all that are mentioned)

Participate more in class ____
Have more interest in the themes ____
Make more questions ____
Understanding with more ease the content ____
Comprehends more about each point ____
Shares knowledge with family ____
Applies learning in an activity outside of school ____
No opinion ____

Other: _____

OPINIONS ABOUT THE GUANAQUÍN

21. Perceived by me the price of the Guanaquín is: (Read options)

Too expensive ____
Just, good ____
Able to be more expensive ____

22. Do you think the majority, half, or less of the parents are able to buy the Guanaquín every Sunday of the school year?

The majority are able to buy ____
Only half are able to buy ____
Scarcely a few are able to buy ____
Able to buy only sometimes ____
The majority ____
Half ____
A few ____

23. Do you think the Guanaquín is written for children from only one grade or from various grades?

Only one age ____

Various grades ____

No opinion ____

24. What sections are written for what grades?

Section of the Guanaquín	Grades
Happy Mailman	____
Science	____
Ecology	____
Literature	____
You Ought to Know	____
Games and Activities	____
Sports	____

25. In general, do you think that the text written in the Guanaquín is of easy, medium or difficult writing?

Easy ____ (question 27) Medium ____ Difficult ____ No opinion ____ (question 27)

26. Why do you consider it of medium or difficult material? (Read options)

Has too much text ____

Obscure writing ____

Vocabulary/concepts too high ____

Small letters ____

At times the letters can't be seen over the background color ____

Diagrams are not adequate for the ages ____

No opinion ____ Other: _____

27. What would you change or modify of the Guanaquín magazine to make it more attractive, more clear to the students? Why?

Change nothing____

Change this ____

For this reason _____

Didn't give reason ____

28. What can be done to help you use the Guanaquín more in class?

Don't have a suggestion ____

A guide of suggestions of use (inside the Guanaquín) ____

More correlation with the program of study ____

Reduce the letters ____

Collect questions/ extra reinforcement ____

Other: _____

29. What other themes about the environment would you like to have the Guanaquín treat?

Good as is ____

Other: _____

PAGES "THE CHILDREN AND US"

30. Do you know the pages "The Children and Us" of the Diario de Hoy that is sold Tuesdays and Thursdays?

Yes ____ No ____ (Terminate the questionnaire)

31. Have you used any times the pages of "The Children and Us" for treating the theme of the environment?

Never used ____ (skip to question 33) Yes have used ____

32. What themes of the environment treated by the pages of "The Children and Us" have you used?
(Read options and mark)

Conservation ____	Contamination ____
Deforestation ____	Food Chain ____
Animals ____	Food ____
Other: _____	

33. What of the two, the pages of "The Children and Us" or the Guanaquín magazine, have you used with more frequency in your classes?

The Children and Us ____	The Guanaquín ____
Both equally ____	No response ____

34. For what reason have you used more ____? (that which was mentioned above)

Because it follows the program ____
Because uses a vocabulary which is very easy to read and understand for the children ____
Because it gives more activities and games ____
Because it treats very interesting themes ____
Because it follows the curriculum materials I use ____
Because the drawings and explanations are more adapted to the children ____
Because the information it gives complements the materials I give ____
Because it gives more indication of that which I am able to do with the children ____
Other: _____

APPENDIX D: DEMOGRAPHICS

Table 1: Demographic Profile of Teachers by Grade

Demographic Profile	N	Grade 0	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 9	<i>p</i>
Overall	58	1	1	4	15	14	10	11	2	N/A
Male	18	---	---	---	8	4	2	3	1	.41
Female	40	1	1	4	7	10	8	8	1	
Urban	48	1	---	3	12	11	8	11	2	.74
Rural	9	---	---	1	3	3	2	---	---	
Provincial	32	---	---	1	13	7	7	4	---	.04
San Salvador	26	1	1	3	2	7	3	7	2	
Public School	49	---	1	---	1	3	1	3	---	.23
Private School	9	1	---	4	14	11	9	8	2	

APPENDIX E: READERSHIP

Percent of students who have ever read the Guanaquín supplement

Demographic Profile	N	Yes
Overall	267	83
Male	125	86
Female	142	81
Urban	210	84
Rural	30	80
Other	24	79
Provincial	155	80
San Salvador	112	88
Public School	225	82
Private School	42	88
2nd Grade	2	50
3rd Grade	64	78
4th Grade	70	84
5th Grade	72	88
6th Grade	59	83

If read, how many of All Guanaquín supplements student read. (% responding)

Demographic Profile	N	1	2-5	6-10	11+
Overall	212	3	36	51	10
Male	103	3	40	49	9
Female	109	4	32	53	11
Urban	168	2	37	51	10
Rural	23	4	30	52	13
Other	19	11	37	47	5
Provincial	118	4	32	55	9
San Salvador	94	2	40	46	12
Public School	180	3	38	49	10
Private School	32	6	25	59	9
2nd Grade	1	0	100	0	0
3rd Grade	48	8	29	54	8
4th Grade	57	4	37	53	7
5th Grade	58	2	38	43	17
6th Grade	48	0	38	56	6

Reasons student didn't read the Guanaquín supplement. (Multiple response, percent)

Demographic Profile	N	Too difficult	Don't buy Sunday paper	No money	No interest	Other reason
Overall	43	9	54	28	9	14
Male	18	0	44	50	11	11
Female	25	16	60	12	8	16
Urban	32	9	59	22	9	16
Rural	6	17	33	33	17	0
Other	5	0	40	60	0	20
Provincial	30	13	47	27	10	10
San Salvador	13	0	69	31	8	23
Public School	38	11	50	29	11	16
Private School	5	0	80	20	0	0
2nd Grade	1	0	100	0	0	0
3rd Grade	14	14	36	14	14	21
4th Grade	11	9	36	46	9	9
5th Grade	7	14	71	29	0	14
6th Grade	10	0	80	30	10	10

How the student got a copy of the Guanaquín supplements to read. (%responding)

Demographic Profile	N	Free	Borrow	Some Borrow /Some Buy	Buy
Overall	222	6	11	9	74
Male	107	8	14	8	69
Female	115	4	9	9	78
Urban	176	7	11	7	75
Rural	24	0	13	13	75
Other	19	11	11	21	58
Provincial	124	8	10	10	73
San Salvador	98	4	13	7	76
Public School	185	7	12	10	72
Private School	37	5	8	3	84
2nd Grade	1	100	0	0	0
3rd Grade	50	4	14	10	72
4th Grade	59	7	9	5	80
5th Grade	63	8	14	11	67
6th Grade	49	4	8	8	80

APPENDIX F: USAGE

What the student did with the Guanaquín supplement. (multiple response, % responding)

Demographic Profile	N	Study	Games & Exercises	Read Stories	Read to Siblings
Overall	221	68	21	10	1
Male	107	68	23	8	0
Female	114	68	18	12	2
Urban	175	70	19	11	1
Rural	24	75	21	4	0
Other	19	53	37	5	5
Provincial	123	74	17	8	1
San Salvador	98	60	26	13	1
Public School	184	69	20	11	1
Private School	37	65	24	8	3
2nd Grade	1	100	0	0	0
3rd Grade	50	60	26	12	2
4th Grade	59	71	15	14	0
5th Grade	62	69	19	10	2
6th Grade	49	69	25	6	0

Student studied the environment using the Guanaquín supplement. (% responding)

Demographic Profile	N	Never	Once	Several Times	Frequently
Overall	222	16	37	39	9
Male	107	20	36	34	10
Female	115	12	37	44	7
Urban	176	14	36	42	9
Rural	24	17	33	38	13
Other	19	26	27	21	5
Provincial	124	14	40	39	8
San Salvador	98	18	34	39	9
Public School	185	18	36	38	9
Private School	37	5	43	43	8
2nd Grade	1	100	0	0	0
3rd Grade	50	16	38	34	12
4th Grade	59	19	39	37	5
5th Grade	63	16	35	40	10
6th Grade	49	10	37	45	8

Percent of students who studied each environmental supplement. (multiple response)

Demographics	N	Trash	Pollution	Earth Day	Recycling	Deforestation	Ecosystem	Energy	Plants & Animals	Noise	Unicef
Overall	182	57	72	15	28	51	21	25	42	19	11
Male	84	54	71	13	27	48	17	25	42	18	10
Female	98	59	72	16	28	54	25	27	42	19	12
Urban	148	60	75	15	26	57	22	25	43	21	10
Rural	18	50	61	22	28	22	11	44	33	17	28
Other	14	36	57	7	36	29	21	14	36	0	7
Provincial	104	56	73	14	33	49	18	25	44	15	12
San Salvador	78	58	71	15	21	54	24	27	39	23	10
Public School	148	55	74	16	28	51	24	30	39	22	12
Private School	34	62	62	9	27	53	9	6	53	6	9
2nd Grade	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3rd Grade	42	67	71	10	24	50	17	21	41	24	14
4th Grade	47	60	79	23	34	53	28	30	45	17	6
5th Grade	51	51	69	14	33	55	20	26	45	20	12
6th Grade	42	50	69	12	17	45	19	26	36	14	12

Where the student used the Guanaquín supplement. (%responding)

Demographic Profile	N	Neither	Home	School	Both
Overall	187	0	80	3	17
Male	86	0	83	2	15
Female	101	0	78	4	18
Urban	151	0	79	3	18
Rural	20	0	90	5	5
Other	14	0	86	0	14
Provincial	107	0	82	4	14
San Salvador	80	0	78	3	20
Public School	152	0	80	4	16
Private School	35	0	80	0	20
2nd Grade	0	N/A	N/A	N/A	N/A
3rd Grade	42	0	88	2	10
4th Grade	48	0	77	2	21
5th Grade	53	0	72	6	23
6th Grade	44	0	86	2	11

How student used the Guanaquín in the house. (multiple response, % responding)

Demographic Profile	N	Homework	Games	Made album	Read
Overall	176	64	77	54	3
Male	82	67	82	54	2
Female	94	61	72	54	4
Urban	142	68	77	58	1
Rural	18	50	83	28	17
Other	14	43	64	57	7
Provincial	99	60	76	58	5
San Salvador	77	69	78	49	1
Public School	142	65	76	53	4
Private School	34	59	79	59	3
2nd Grade	0	N/A	N/A	N/A	N/A
3rd Grade	40	58	75	53	5
4th Grade	47	55	79	57	2
5th Grade	47	68	83	60	2
6th Grade	42	74	69	45	5

APPENDIX G: PREFERENCES

Percent of students who liked the character(s) in the Guanaquín supplement. (Multiple Response)

Demographic Profile	N	Boy	Girl	Guanaquín	Toad	Turtle	Bird	Sun	Pencil
Overall	219	18	15	53	16	18	25	12	16
Male	106	18	14	58	21	21	20	13	18
Female	113	18	15	49	12	16	30	12	15
Urban	174	19	16	55	18	22	26	14	18
Rural	24	4	8	63	17	4	17	4	8
Other	18	28	11	33	6	0	28	6	0
Provincial	123	16	15	51	18	20	27	13	16
San Salvador	96	20	14	55	15	17	23	12	17
Public School	182	20	15	52	17	20	26	13	16
Private School	37	8	11	57	14	11	22	11	19
2nd Grade	1	0	0	0	0	100	0	0	0
3rd Grade	48	8	6	60	15	13	23	6	8
4th Grade	58	21	17	57	17	17	24	17	17
5th Grade	63	21	18	54	14	14	30	13	19
6th Grade	49	18	16	41	20	29	22	12	20

Percent of students who liked this/these character(s) in the Guanaquín supplement. (multiple response)

Demographic Profile	N	Worm	Rabbit	Camel	Ant	Oyster	Fish	Deer	All
Overall	219	16	1	1	1	1	1	1	5
Male	106	17	1	3	1	0	0	1	7
Female	113	15	0	0	0	1	1	2	4
Urban	174	17	0	2	1	1	0	2	6
Rural	24	8	0	0	0	0	0	0	0
Other	18	11	6	0	0	0	6	0	6
Provincial	123	15	1	0	1	0	1	2	4
San Salvador	96	17	0	3	0	1	0	1	6
Public School	182	15	1	2	1	1	1	2	6
Private School	37	19	0	0	0	0	0	0	3
2nd Grade	1	0	0	0	0	0	0	0	0
3rd Grade	48	8	0	2	0	0	0	0	4
4th Grade	58	17	0	2	0	2	0	0	7
5th Grade	63	19	2	2	0	0	0	2	6
6th Grade	49	18	0	0	2	0	2	4	2

Percent of students who disliked this/these character(s) in the Guanaquín supplement. (multiple response)

Demographic Profile	N	Boy	Girl	Guanaquín	Toad	Turtle	Bird	Sun	Pencil
Overall	172	2	8	8	17	5	9	2	9
Male	84	2	12	6	17	7	8	2	16
Female	88	1	3	9	17	2	9	2	3
Urban	129	0	10	7	17	5	7	2	12
Rural	22	14	0	5	18	5	9	5	0
Other	18	0	0	6	17	6	17	0	6
Provincial	99	3	9	4	14	6	9	2	6
San Salvador	73	0	6	12	21	3	8	3	14
Public School	142	2	7	7	15	5	10	1	9
Private School	30	0	10	10	27	3	3	7	13
2nd Grade	1	0	0	100	0	0	0	0	0
3rd Grade	42	2	12	7	14	5	5	7	7
4th Grade	41	5	7	7	24	2	15	0	7
5th Grade	49	0	2	6	8	10	4	2	8
6th Grade	39	0	10	8	23	0	13	0	15

Percent of students who disliked this/these character(s) in the Guanaquín supplement. (multiple response)

Demographic Profile	N	Worm	Rabbit	Camel	Ant	Oyster	Fish	Fly	Spider	Cockroach	Snail	Rat	Earth
Overall	172	24	1	1	4	1	9	1	2	5	2	1	1
Male	84	19	1	0	2	0	9	1	4	5	2	0	1
Female	88	28	0	1	5	2	14	0	0	5	1	1	0
Urban	129	25	1	1	4	2	9	1	2	2	2	0	1
Rural	22	23	0	0	0	0	0	0	0	23	0	0	0
Other	18	22	0	0	6	0	17	0	0	0	0	6	0
Provincial	99	25	0	0	6	0	7	0	0	5	1	1	1
San Salvador	73	22	1	1	0	3	11	1	4	4	3	0	0
Public School	142	26	1	1	2	1	11	0	2	6	2	1	1
Private School	30	13	0	0	10	0	0	3	0	0	0	0	0
2nd Grade	1	0	0	0	0	0	0	0	0	0	0	0	0
3rd Grade	42	24	2	0	5	2	14	0	2	7	0	0	2
4th Grade	41	12	0	0	2	2	7	0	5	5	2	0	0
5th Grade	49	37	0	2	4	0	6	2	0	4	4	2	0
6th Grade	39	21	0	0	3	0	8	0	0	3	0	0	0

What student thinks about the colors used in the Guanaquín supplement. (% responding)

Demographic Profile	N	Better w/o color	Needs more	Too strong	Too weak	Are good
Overall	222	1	5	1	4	89
Male	107	0	4	1	5	91
Female	115	2	5	2	4	88
Urban	176	1	5	1	4	89
Rural	24	0	4	4	0	92
Other	19	0	0	0	11	90
Provincial	124	1	4	2	4	90
San Salvador	98	1	5	1	4	89
Public School	185	1	4	1	3	91
Private School	37	0	5	5	8	81
2nd Grade	1	0	0	0	0	100
3rd Grade	50	0	6	0	6	88
4th Grade	59	2	0	2	5	92
5th Grade	60	2	3	2	3	91
6th Grade	49	0	10	2	2	86

What student thinks of the number of drawings in the Guanaquín supplement. (%responding)

Demographic Profile	N	Too Many	Too Few	Sufficient
Overall	219	5	13	83
Male	106	4	8	88
Female	113	5	17	78
Urban	173	4	12	84
Rural	24	13	13	75
Other	19	0	11	89
Provincial	122	3	15	82
San Salvador	97	6	10	83
Public School	182	5	13	82
Private School	37	0	14	86
2nd Grade	1	100	0	0
3rd Grade	50	6	6	88
4th Grade	59	3	14	83
5th Grade	62	5	18	77
6th Grade	47	2	13	85

What the student thinks of the amount of text in the Guanaquín supplement.
 (% responding)

Demographic Profile	N	Too little	Too much	Enough
Overall	219	10	7	83
Male	104	11	9	81
Female	114	9	6	85
Urban	174	9	8	83
Rural	23	22	0	78
Other	18	0	11	89
Provincial	121	10	7	83
San Salvador	97	9	7	84
Public School	181	12	7	81
Private School	37	0	8	92
2nd Grade	1	0	0	100
3rd Grade	49	14	8	78
4th Grade	58	9	10	81
5th Grade	62	7	8	86
6th Grade	48	10	2	88

In these issues of the Guanaquín supplement, percent of students who had problems reading the text against the background colors. (multiple response)

Demographic Profile	Deforestation (N)	Ecosystem (N)	Noise (N)	Water Pollution (N)
Overall	26 (19)	5 (22)	5 (19)	7 (15)
Male	29 (7)	0 (13)	11 (9)	0 (3)
Female	25 (12)	11 (9)	0 (10)	8 (12)
Urban	27 (15)	7 (15)	7 (15)	9 (11)
Rural	N/A	N/A	0 (1)	0 (4)
Other	25 (4)	0 (7)	0 (3)	N/A
Provincial	17 (12)	0 (9)	0 (10)	0 (5)
San Salvador	43 (7)	8 (13)	11 (9)	10 (10)
Public School	36 (11)	5 (22)	6 (16)	7 (15)
Private School	13 (8)	N/A	0 (3)	N/A
2nd Grade	N/A	N/A	0 (1)	N/A
3rd Grade	50 (8)	0 (3)	0 (4)	20 (5)
4th Grade	0 (4)	14 (7)	20 (5)	0 (5)
5th Grade	0 (5)	0 (5)	0 (4)	0 (3)
6th Grade	50 (2)	0 (7)	0 (5)	0 (2)

Percent of students who liked games/activities/experiments in the Guanaquín supplement.

Demographic Profile	N	Yes
Overall	214	100
Male	105	99
Female	109	100
Urban	169	99
Rural	23	100
Other	19	100
Provincial	119	99
San Salvador	95	100
Public School	178	99
Private School	36	100
2nd Grade	1	100
3rd Grade	48	100
4th Grade	58	100
5th Grade	60	100
6th Grade	46	98

Percent of students who needed the most help on these activities. (multiple response)

Demographic Profile	N	Cross-word	Dot-to-dot	Games	Questions	Fill-in-blank	Mazes	Word search	Experiments
Overall	216	42	42	44	45	30	46	3	54
Male	106	40	38	44	47	28	46	4	60
Female	110	45	46	45	44	31	46	2	48
Urban	172	42	45	45	50	34	50	4	60
Rural	24	33	38	58	13	25	33	0	21
Other	17	47	18	18	43	0	35	0	47
Provincial	122	48	42	41	44	30	51	2	50
San Salvador	94	35	42	49	47	30	40	4	60
Public School	179	40	44	46	46	31	50	3	55
Private School	37	54	30	38	43	22	30	3	51
2nd Grade	1	0	100	0	0	100	100	0	0
3rd Grade	48	27	40	56	50	21	42	2	42
4th Grade	57	44	47	46	42	37	44	5	49
5th Grade	61	48	38	36	44	33	51	2	61
6th Grade	49	49	41	43	47	25	47	2	65

**How much games/activities/experiments in the Guanaquín supplement student did.
(% responding)**

Demographic Profile	N	None	Some	Majority
Overall	222	5	56	39
Male	107	4	56	40
Female	115	6	56	38
Urban	176	5	53	42
Rural	24	8	58	33
Other	19	0	79	21
Provincial	124	5	53	42
San Salvador	98	5	59	36
Public School	185	6	56	38
Private School	37	0	54	46
2nd Grade	1	0	100	0
3rd Grade	50	8	50	42
4th Grade	59	2	53	46
5th Grade	63	5	60	35
6th Grade	49	6	59	35

APPENDIX H: CLARITY OF TEXT

Clarity to student of Guanaquín supplement game/activity/experiment instructions.
 (% responding)

Demographic Profile	N	No opinion	Very unclear	Some clear/ some not	Sufficiently Clear
Overall	208	1	5	21	74
Male	103	1	5	22	72
Female	105	0	6	19	75
Urban	164	0	6	21	74
Rural	22	0	5	27	68
Other	19	5	5	16	74
Provincial	117	1	6	24	69
San Salvador	91	0	4	17	79
Public School	171	0	6	22	72
Private School	37	3	0	16	81
2nd Grade	1	0	0	0	100
3rd Grade	45	2	2	20	76
4th Grade	58	0	9	14	78
5th Grade	58	0	7	21	72
6th Grade	46	0	2	30	67

Why Guanaquín supplement instructions were not clear to students. (% responding)

Demographic Profile	N	No response	Not able to follow	Not understand what was written	Many reasons
Overall	52	8	81	10	2
Male	26	0	89	12	0
Female	26	15	73	8	4
Urban	42	7	83	7	2
Rural	6	17	67	17	0
Other	4	0	75	25	0
Provincial	33	9	79	9	3
San Salvador	19	5	84	11	0
Public School	46	9	80	9	2
Private School	6	0	83	17	0
2nd Grade	0	N/A	N/A	N/A	N/A
3rd Grade	9	22	67	11	0
4th Grade	12	0	83	8	8
5th Grade	16	6	75	19	0
6th Grade	15	7	93	0	0

APPENDIX I: THE CHILDREN AND US

Percent of students who have seen the Tuesday/Thursday “The Children and Us” supplement.

Demographic Profile	N	Yes
Overall	263	78
Male	125	73
Female	138	82
Urban	206	76
Rural	30	80
Other	24	92
Provincial	153	82
San Salvador	110	42
Public School	221	77
Private School	42	81
2nd Grade	2	50
3rd Grade	62	66
4th Grade	70	80
5th Grade	72	81
6th Grade	57	84

Where student has use “The Children and Us” supplement. (% responding)

Demographic Profile	N	Neither	Home	School	Both
Overall	204	2	58	15	26
Male	91	0	55	17	29
Female	113	4	60	13	24
Urban	156	1	55	16	28
Rural	24	0	83	4	13
Other	22	0	55	18	27
Provincial	125	0	61	14	25
San Salvador	79	4	53	15	28
Public School	170	1	57	15	27
Private School	34	6	62	12	21
2nd Grade	1	0	100	0	0
3rd Grade	41	0	81	5	15
4th Grade	56	2	52	20	27
5th Grade	58	3	52	20	27
6th Grade	48	0	48	19	33

**How much student used “The Children and Us” supplement as school or home.
(% responding)**

Demographic Profile	N	Never	A few times	Many times
Overall	203	3	51	45
Male	90	1	50	49
Female	113	5	51	45
Urban	155	3	44	53
Rural	24	0	75	25
Other	22	0	82	18
Provincial	125	1	54	45
San Salvador	78	8	46	46
Public School	169	3	53	44
Private School	34	6	44	50
2nd Grade	1	0	100	0
3rd Grade	41	7	61	32
4th Grade	55	2	47	51
5th Grade	58	5	50	45
6th Grade	48	0	48	52

What student used “The Children and Us” supplement for. (multiple response)

(% responding)

Demographics	N	Resolve problem	Writin g	Collec- tion	Copy	Consul t	For pre- sentatio n	Study	Read	For fun	Trans- action s
Overall	197	38	20	39	35	44	17	39	3	2	1
Male	90	44	19	31	36	47	14	40	2	1	1
Female	107	33	21	46	34	42	19	38	3	2	0
Urban	151	42	21	42	37	46	19	44	2	1	1
Rural	24	8	29	33	25	42	8	17	8	4	0
Other	22	41	5	27	27	36	14	32	0	0	0
Provincial	124	39	21	40	36	42	17	39	2	2	1
San Salvador	73	37	18	37	32	48	16	40	3	0	0
Public School	165	36	19	39	34	42	16	42	3	2	1
Private School	32	50	25	38	38	53	19	25	0	0	0
2nd Grade	1	0	0	100	0	100	0	0	0	0	0
3rd Grade	38	26	18	45	24	40	21	32	3	0	0
4th Grade	55	42	16	38	36	35	16	44	4	2	2
5th Grade	55	40	22	38	36	46	13	40	2	4	0
6th Grade	48	42	23	35	40	56	19	40	2	0	0

Percent of students who used “The Children and Us” supplement for an environmental theme.

Demographic Profile	N	Yes
Overall	195	75
Male	89	74
Female	106	75
Urban	150	77
Rural	24	67
Other	21	62
Provincial	123	76
San Salvador	72	72
Public School	163	74
Private School	32	75
2nd Grade	1	100
3rd Grade	38	74
4th Grade	54	80
5th Grade	55	69
6th Grade	47	75

Which supplement students used more: “Guanaguín” or “The Children and Us.”(%responding)

Demographic Profile	N	Guanaguín	The Children and Us
Overall	191	40	60
Male	87	36	64
Female	104	44	56
Urban	147	41	59
Rural	23	39	61
Other	21	38	62
Provincial	120	38	63
San Salvador	71	45	55
Public School	159	41	59
Private School	32	38	63
2nd Grade	1	100	0
3rd Grade	37	46	54
4th Grade	53	32	68
5th Grade	54	48	52
6th Grade	46	35	65

Reason students used the “Guanaquín” supplement more. (multiple response)

(% responding)

Demographics	N	Follows program	Easy	Games/ activities	Interes- ting themes	Written for childre n	Comp- lements studies	Gives direction	Helps w/ school work	Environ- ment topics
Overall	76	16	41	70	61	53	55	41	1	1
Male	31	16	39	74	45	61	61	45	3	3
Female	45	16	42	67	71	47	51	38	0	0
Urban	60	18	45	68	65	53	60	43	2	0
Rural	83	13	13	63	38	25	25	13	0	0
Other	8	0	38	88	50	45	50	50	0	13
Provincial	44	16	48	66	64	50	52	43	2	2
San Salvador	32	16	31	75	56	56	59	38	0	0
Public School	65	19	39	68	59	48	54	37	2	2
Private School	11	0	55	82	73	82	64	64	0	0
2nd Grade	1	0	0	100	0	100	0	0	0	0
3rd Grade	17	6	47	77	41	53	65	41	0	0
4th Grade	18	22	50	67	72	67	50	33	0	0
5th Grade	25	28	40	80	64	44	56	44	0	0
6th Grade	15	0	27	47	67	47	53	47	7	7

Reason students used “The Children and Us” supplement more. (multiple response)
(% responding)

Demographic Profile	N	Follows program	Easy	Games/ activities	Interes- ting themes	Written for childre n	Comp- lements studies	Gives direction	Helps w/ school work
Overall	96	45	24	18	32	25	58	27	4
Male	49	53	22	16	33	20	53	27	2
Female	47	36	26	19	32	30	64	28	6
Urban	78	49	21	15	30	23	54	27	4
Rural	8	13	13	25	38	0	63	25	0
Other	10	40	60	30	50	60	90	30	10
Provincial	58	41	26	21	36	28	31	31	2
San Salvador	38	50	21	13	26	21	55	21	8
Public School	78	49	24	21	32	28	58	31	5
Private School	18	28	22	6	33	11	61	11	0
2nd Grade	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3rd Grade	16	44	6	31	25	38	50	19	0
4th Grade	30	30	33	20	33	30	53	27	7
5th Grade	23	32	22	13	30	22	74	22	4
6th Grade	27	56	26	11	37	15	56	37	4